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MADRID SOCIAL HOUSING

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ABSTRACT

The program developed by the Empresa Municipal de la Vivienda y Suelo in Madrid is part of the transformation process experienced by the city in the last years. No less than 59.000 new dwellings will be realized by the government between 2003 and 2011, 32.500 of which are VPO (Vivienda de Protecion Official). The goal is represented by a wide program of urban regeneration supported by the government, together with a new ground policy and the sustainable requalification of the existing heritage in the consolidated urban areas through tax incentives. The first target is to assure an easier access to quality dwellings for people with low income, offering prices 30% lower than the market ones. This scheme is based on national and international competitions, and on the participation to European programs I+D+I for the definition of innovative materials and new housing typology responding to the user's needs.

As a result, Madrid gained a range of public housing for rent and sale, which not only is an example of architectural quality, but also contributes to the balance of the territory and to the growth and transformation of the urban landscape. According to the effective urban regeneration and to the importance of the contribution of social housing to the quality of life of its citizens, Madrid was chosen to participate to the Shanghai Expo 2010 "Better City, Better Life".

Key words: Social housing, Madrid, EMVS, Architecture, Innovation

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Introduction

The plan developed by the Empresa Municipal de la Vivienda y Suelo of Madrid is part of the transformation process that this city has experienced in the latest years and plans the construction, between 2003 and 2011 of 59,000 new dwellings with different forms of public protection and among these 32,500 VPO (vivienda de protecion official) [1]. The goal is to implement a comprehensive urban renewal program in collaboration with the government, together with a new land policy and the redevelopment of the existing houses in consolidated urban areas through incentives. Moreover, the struggle against the illegal and critical buildings is carried out through the removal, census and subsequent allocation of the inhabitants in new houses. The first objective of this policy is to ensure that people in trouble, especially young people, have access to quality houses and to prices three times lower than the free market. Another objective is to set up the public housing as an example of quality, innovation and sustainability. The formula is the same of the national and international competition together with the participation to European programs for the development of innovative materials and typologies suitable to all users' needs. The focus is a high quality housing based on type repetition, in which the variation is achieved by adding extra spaces to the basic form. The layout can be modified in relations to the changes of use over time. The spaces alternate with technological areas, enabling to put together contemporary needs such as cohabitation, working areas and later time divisions. Finally, there is a significant search for the most advanced system of active and passive energy efficiency to improve the sustainability. Even the design of the public spaces is thought to enhance quality and improve the urban accessibility. As a result, Madrid has a quantity of public housing for rent and sale: this is not only an example of quality, but also a factor that contributes to the balance of the area and to the urban landscape transformation and growth. The contribution to the quality of life development of social housing inhabitants and the transformation of the city led to the choice of Madrid for the Shanghai Universal Expo 2010, centered on the theme "Better City, Better Life"[2].

The origins of an urban phenomenon of a so large importance should be found in changes which have affected the urban area of Madrid since the 50s and 60s [3]. During that period, there has been a great migration of workers attracted by the possibilities of employment in the new metallurgical, steel and manufacturing industries, mainly located in the suburban areas. In 1985, a new program for the city development has been launched: it is known as Plan General de Ordenación Urbana de Madrid. It aimed to keep down the expansion, but at the same time to ensure a kind of mending between the suburban areas occupied by workers and the rest of the city. However, after the crisis in the Spanish economy, from 1986 to 1992, the Plan General de Ordenación Urbana de Madrid is brought into question and, at the same time, there was a big concentration of the land ownership in a few owners' care: in fact, many farmers and ranchers begin to sell them their lands because of the economic crisis. After 1992, a recovery and a change in the economy started, moving

from a financial system primarily based on industry to one based on the tertiary sector. In 1997, there is an abandonment of the mending policy carried out so far and the city can eventually grow up to the limit, converting all those previously bought territories into urban areas. In this way, lands suddenly acquired a great value, allowing owners to rapidly start new building interventions.

An unprecedented expansion in a short period of time has been imposed to the Office for Urbanism of Madrid, which had always created gradual development plans. The new districts are: Sanchinarro, Vallecas, Carabanchel and Nueva Centralitat. The plans made for the development of these areas are based on the maximum yield. They have not been chosen on the basis of a competition, nor thought by the municipality which, even so, had to take action on them. It's mainly about block buildings with a private courtyard in which a garden and other services for residents take place, in an urban scheme not shared by the public urbanism. The margin on which the municipality can take action concerns social housing: the legislation provides that in case a development of this range is implemented, 50% of the areas should be allocated to public use and a part of that can be realized by privates for social housing. The Empresa Municipal de la Vivienda y Suelo uses the remaining 30% of the land for public housing, built at the same cost but without the impact of the land value on the final price.

Over the past 25 years, more than 60 social housing projects have been realized. For this interventions, new standards and strategies for socio-economic needs and housing quality have been developed. Another key issue concerns the integration in the urban context, as well as the several formal solutions offered. At the beginning, projects were assigned to Spanish architects, while recently, there has been a great collaboration with foreign professionals, as many cases show, for example: MVRDV with Blanca Lleò, Peter Cook with Gavin Robotham and Salvador Perez Arroyo, Arata Isozaki with Manuel Serrano and Conche Rodriguez, and Wiel Arets with Fuensanta Nieto and F. M. Fernandez-Isla. The EMVS program is designed for the broadest population bracket and for families with an income that, at the market conditions, would certainly give access to a lower quality or smaller accommodation. Recently, the land value compared with the price of housing has grown from 20% to 60%. In this way, the cost of apartments has increased by four times. Banks began to grant higher and higher mortgage loans, more than 100% of the housing cost, thus allowing the housing market to raise prices. There is a gap of about 40% between the cost of the apartment sold by private investors and that of EMVS, but the fundamental difference can be found in the design which pays attention to the quality aspects of living.

The continuous research of excellence in the construction of public housing is one of the main goals pursued through various initiatives including the participation in the European project of scientific research, technological development and innovation "Manu-build" (I+D+i). It set the creation of a flexible, sustainable, industrialized and

easily modifiable housing over time. Another objective is to propose a different urban system: the private and inaccessible courtyard of the blocks contrasts with a more open correlation between interiors and exteriors, which generates a new space: the built board is occupied but at the same time, a communication between public spaces and private courtyards is kept too. It is a still-in-progress process, a research that can be analyzed through the description of some remarkable projects.

Carabanchel 06 – Aranguren y Gallegos Architects

The building appears with linear volumes, pierced by lines of windows with different locking systems that create a horizontal movement. The economic factor leads to the rationalization and adaptation, but the increasing complexity of requirements needs a greater flexibility. Kitchens and bathrooms should be considered as a fixed element, but the rest can be transformed and changed through moving parts during day and night. During the day, at the time of greatest activity, walls can be folded and beds are hidden into the niches of the central spine. At night, the space is divided creating rooms and beds.

There has been an identification problem with residents. In many cases, flexible walls no longer exist and have become fixed partitions (Fig. 1).

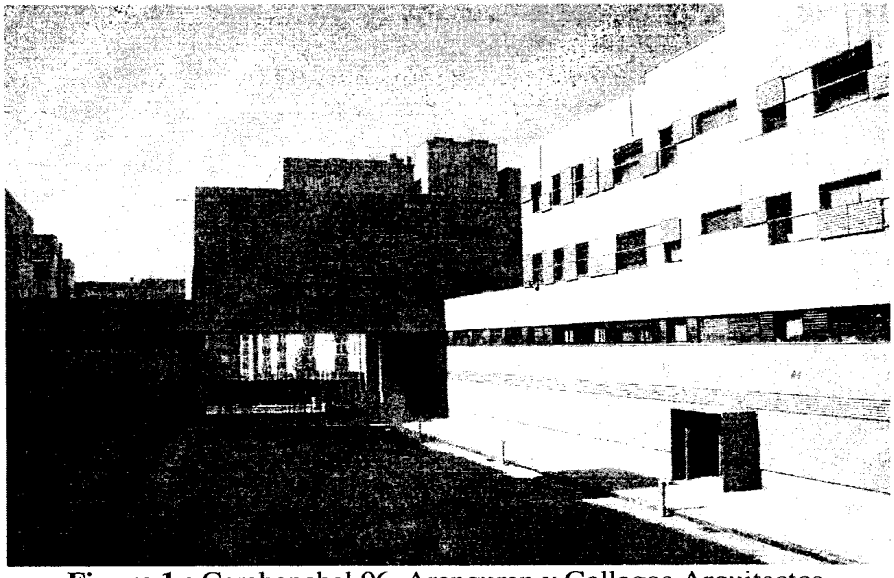

Figure 1 : Carabanchel 06, Aranguren y Gallegos Arquitectos.

Carabanchel 11 – Morphosis y Begoña Díaz/Urgorri Architects

The project aims to incorporate the landscape as primary element in building, exploring new hierarchies and models. The idealized concept of detached houses in a dense urban environment maximizes the number of units with outside access, thus creating three thousand square meters of open landscape for a total of 141 houses with two, three or four bedrooms. The apartments are duplex with kitchen, each with a private patio. The iron structures are designed to create a green cover.

At the beginning, it was a very interesting project, which became more and more complicated to carry out. It would have been developed mostly in height (12 floors), but it has not been possible because of planning restrictions in that area. The articulation occurs on three floors of yards and two axis: x and z, through the same logic regarding the "communication" elements. During the implementation, the horizontal development has prevailed on the vertical.

Carabanchel 16 – FOA Architects

In the proposal, the building volume has been brought at the given height to obtain a private garden on the east side. It is about passing through units: plants cross the building from side to side, offering a better climate comfort. The loggia, 1,5 m deep on each side, works as filter, enabling the glass surfaces to be expanded. Each vertical communication unit serves two apartments. The project aims to provide the greatest possible amount of housing space, flexibility and quality, erasing the gaps between units in a single volume and homogeneous skin. Some residents have reused the same materials of the façade to cover the balconies. The energy saving is obtained through the use of materials but also with the good orientation. Even in the underground parking, a natural ventilation has been designed and where possible, the natural lighting too (Fig. 2).

Eco-boulevard Vallecas – Ecosistema Urbano

In Vallecas, it has been possible to operate on the urban system, obtaining a grid of north-south oriented streets and three mechanical trees forming the system on which the space is organized (Eco-boulevard). As it was not possible to carry out a leisure area with several big trees, it was decided to introduce a new concept of "square", which functions as meeting and identification place but also offers natural wellness: a shady and fresh area, with self-alimented air vents thanks to the solar panels. The three trees function as support to the many activities chosen by the users. Installed as temporary and removable structures, the trees can be used until when climate condition will have been corrected (Fig. 3).

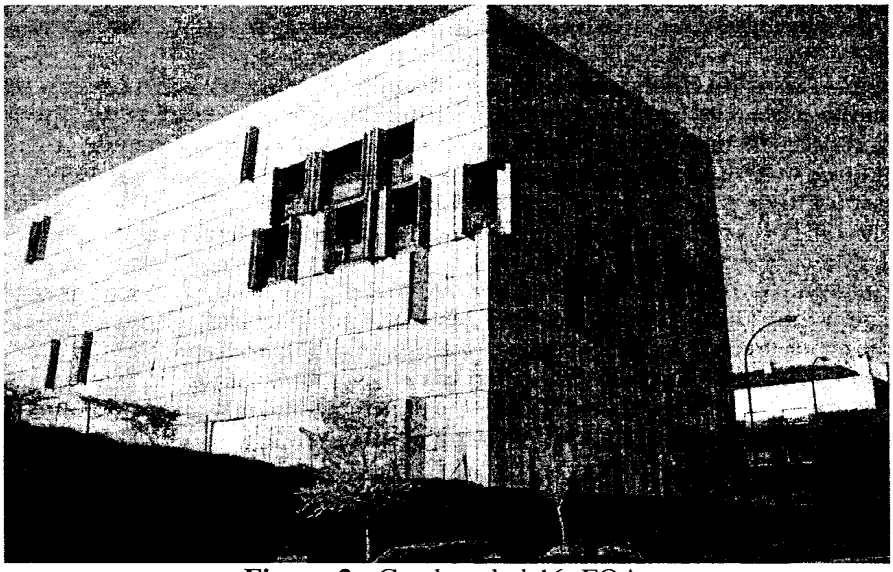

Figure 2 : Carabanchel 16, FOA.

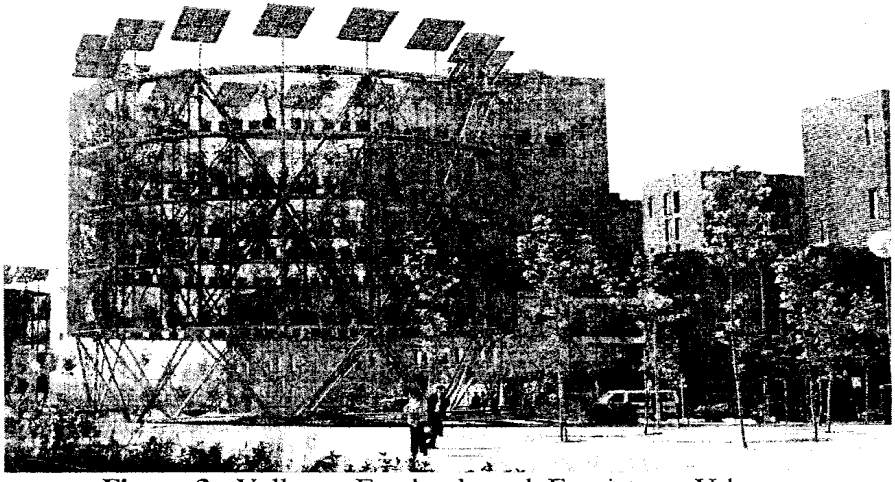

Figure 3 : Vallecas, Eco-boulevard. Ecosistema Urbano.

Sunrise Vallecas 07 – Feilden Clegg Bradley Architects, Iñigo Ortiz y Enrique León

The project has been selected within the European program *Sunrise*, adopted by the 5th Program *Marco de Investigación y Desarrollo Tecnológico* and sponsored by the T.R.E.N. general direction, which aims to reduce the costs of energy consumption and the carbon dioxide emissions by about 70% compared to the standard homes, along with an improved thermal comfort. The planning takes into account the energy consumptions control through ventilations and natural lighting systems, the use of solar energy for hot water and the decrement of electricity consumptions. The proposal aims to demonstrate the efficiency and the implementation, even social, of the bioclimatic architecture, through the improved solar heating, the use of ventilated facades and a differentiated treatment of the latter, the optimum distribution of the houses and the use of sunscreens.

Vallecas 16 – Jorge Javier Camacho y Maria Eugenia Macía

The planning is located in an outskirt, with no historical context. The building project aims to create a recognizable and defined environment forming the new city frame. Houses cross in a 15 meters corridor, rising above the common internal areas. Services are put together freeing the day and the night spaces to ensure a greater flexibility. The west-oriented living area is connected to the kitchen-laundry, while bedrooms, in the east part, are arranged in the services area.

Among the services areas there is an internal patio. The external façade is opaque, closed off from the context, while the east-facing part looks on a natural internal space which includes vertical communication elements. Thus, a new way of understanding is proposed in the common areas: no longer as residual spaces, but as key element of the entire project. The vertical communication areas are broken down and placed in a natural frame which creates an artificial dense forest.

Sanchinarro 06 – MVRDV y Blanca Lleó

Lightness is at the core of the project, allowing views from the inside to the outside and vice versa, through suspended courtyards designed to become gardens. The building is accomplished through the prefabricated system "total mold" and there is a basic unit with two variants for a total of 146 homes with one, two or three bedrooms, with versatile and spacious bathrooms and relaxing area. A further room is expected to develop: an entrance not counted in the square meters built, useful or habitable because open, but actually used by residents as an extra space.

Sanchinarro 12 – Francisco Burgos y Ginés Garrido

The facades are moderate and regular and contribute to protect the internal environment from the gaze of passers-by. The building is a compact block, but the internal garden, which gives access to the houses, is directly overlooked by the road. The spiral shape enhances the interior space, combining the urban scale with the domestic one. The geometrical structure is based on a 2,65 meters mesh and enables the double disposition of the dwellings by varying the orientation, with a great flexibility in the types. Cross ventilation, double circulation, double orientation and a variety of types are another fundamental feature (Fig. 4).

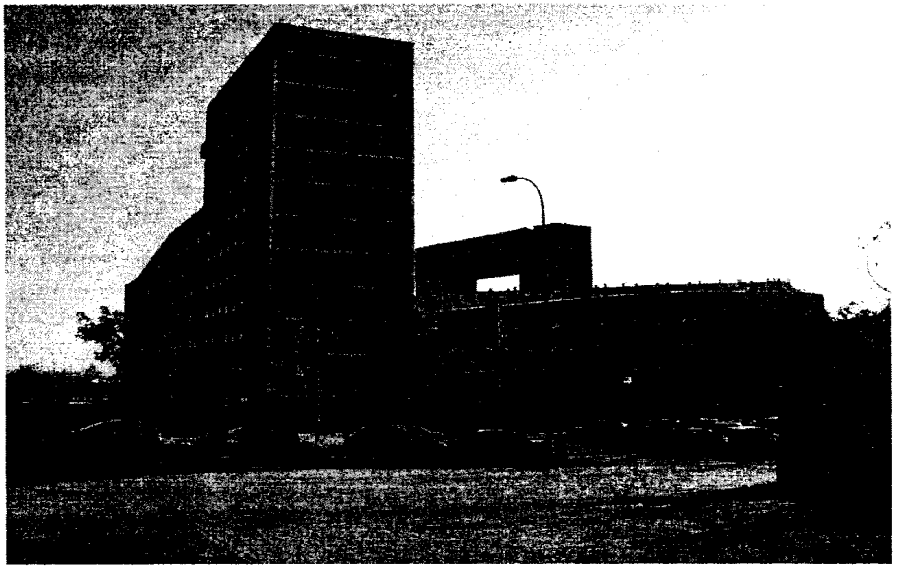

Figure 4 : Sanchinarro 12, Francisco Burgos y Ginés Garrido.

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